REMARKS

Claims 1 and 27 have been amended to clarify the invention, and new claims 36 and 37 have been added. Accordingly, claims 1-37 are pending.

The Examiner rejected claims 1-35 under 35 U.S.C. 103(a) as being unpatentable over Arendt (U.S. 6,003,075) and Arendt (6,427,163). The Examiner's rejection is traversed as follows.

Claim 1 is directed towards a "method for implementing high availability in a fibre channel switch in a storage area network." That is, high availability is implemented in a fibre channel switch. Claim 1 also requires "identifying a message that was sent from a first application running on an active supervisor in a fibre channel switch." Thus, the identified message was sent from a first application running in an active supervisor of a fibre channel switch. Claim 1 also requires "determining high availability characteristics associated with the message, wherein high availability characteristics provide information for synchronizing a second application running on a standby supervisor in the fibre channel switch with the first application" and "providing the message to the second application running on the standby supervisor when high availability characteristics indicate that the message should be mirrored." That is, high availability characteristics of this identified message sent from the first application is determined and used to provide the message to a second application of a standby supervisor in the same fibre channel switch. Claim 27 requires mechanisms for performing the operations of claim 1.

Claim 13 is directed towards a "fibre channel switch" that includes "a fibre channel line card coupled to an external fibre channel network entity." Claim 13 also requires the fibre channel switch to include "a first supervisor coupled to the fibre channel line card through a backplane" and "a second supervisor coupled to the first supervisor." Claim 13 further requires that "wherein the first supervisor is configured to identify a message from the external fibre channel network entity that alters the state of the first supervisor and send an acknowledgement to the external fibre channel network entity before the message is passed to the second supervisor."

In contrast to all the independent claims, both cited Arendt references are directed towards multiprocessing servers, rather than fibre channel switches in a storage area network. The first reference Arendt (U.S. 6,003,075) teaches a system that includes clients that run cluster software while working with server applications that access data on shared disks. See the cited section at Col. 4, Lines 3-9. Events that occur with respect to processor events are stored in event queues. Supra, Lines 35-63: "Coordination in processing events – typically failure (or "failover") events and recovery (or "reintegration") events – related to highly available resources is required." See also Col. 5, Lines 20-24: "all events relating to nodes are assigned a first priority while all events relating to adapters are assigned a second priority and all events relating to application servers are assigned a third priority." In other words, the first reference Arendt (U.S. 6,003,075) teaches events that are queued for a processor event and fails to teach or suggest identifying a message sent from a first application running in an active supervisor in a fibre channel switch (or means for performing the same), in the manner claimed in claims 1 and 27. Additionally, the second reference Arendt (6,427,163) also fails to teach or suggest such limitation. Since the cited references fail to teach or suggest such limitation, it is respectfully submitted that claims 1 and 27 are patentable over the cited references.

The Examiner admits that the first reference Arendt (U.S. 6,003,075) also does not disclose the remaining limitations of claim 1 and 27. The second reference Arendt (6,427,163) is also directed towards cluster processing, where processors are divided into different resource groups. Within each resource group, "typically only one data processing system manages a given application" and "other data processing systems are designated to assume management of the application should the primary data processing system fail." To facilitate this, a "configuration object for each resource group is replicated to each data processing systems within the resource group." See Col. 5, Lines 31-40. Such replication process is not occurring in a fibre channel switch or in even a generic switch. Additionally, the replicated configuration object was not sent by an application running in a fibre channel switch. In contrast, the configuration object includes "cluster information, such as resource group information such as application packages for an application type of resource, shared disks for a shared disk type of resource, data processing system and disk connectivity information, service IP addresses for a service IP address types of resource, data processing systems where applications are installed and configured". See Col. 5, Lines 42-62. However, the second reference Arendt fails to teach or suggest a message that was sent by an application running in a switch (or a mechanism for doing

the same), in the manner claimed in claims 1 and 27. This cluster information is replicated to data processing systems (see Col. 6, Lines 31-53), rather than replicating to an application running in the switch (or mechanisms for performing the same operation), in the manner claimed in claims 1 and 27. For the forgoing reasons, it is respectfully submitted that claims 1 and 27 are patentable over the cited references.

Additionally, the cited references also fail to teach or suggest "a fibre channel line card coupled to an external fibre channel network entity" and a "first supervisor [that] is configured to identify a message from the external fibre channel network entity that alters the state of the first supervisor and send an acknowledgement to the external fibre channel network entity before the message is passed to the second supervisor" as recited in claim 13. The Examiner has failed to cite portions of the Arendt references that teach the limitations of claim 13. It is respectfully submitted that the cited references fail to teach or suggest such limitations.

The Examiner's rejections of the dependent claims are also respectfully traversed. However, to expedite prosecution, all of these claims will not be argued separately. Claims 2-12, 14-26, and 28-37 each depend directly or indirectly from independent claims 1, 13, or 27 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claims 1, 13, or 27.. Further, the dependent claims require additional elements that when considered in context of the claimed inventions further patentably distinguish the invention from the cited art. For example, new claim 36 recites that "the message is received into the fibre channel switch by the first application and sent by the first application out of the fibre channel switch." Claim 37 requires that "the message is sent by the first application to another application." The cited references also fail to teach or suggest such limitations.

In view of the foregoing, Applicants believe all rejections have been overcome thereby placing all independent and dependent claims now pending in this application in condition for

allowance. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at the number provided below.

Respectfully submitted,
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